Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_ Core\_\_\_\_\_\_\_

**“The Translating Detective”**

**Case 1**

1. **Graph, label** and **connect** the following ordered pairs (points):

A = (-5,1)

B = (-2,1)

C = (-3,4)

1. What geometric figure do you see?
2. What quadrant is the figure in?
3. Translate your figure to the right 4 units and down 3 units.
4. Document and label your new points.

A’ = ( , )

B’ = ( , )

C’ = ( , )

**Good investigation work! Now answer a few questions about your case!**

1. What quadrant is this *new* geometric shape in?
2. Compare your old points with your new points. Describe the changes that occurred in the x values and the changes that occurred in the y values. (Give me one or two complete sentences to describe your findings)
3. Now take your descriptive words from number 7 and put them in mathematical terms. Document the rule used to transform triangle ABC to triangle A’B’C’.

( x +/- \_\_\_\_\_ , y +/- \_\_\_\_\_ )

**Let’s Create!!**

1. Create your very own rule to transform (move) the original polygon (triangle ABC) into

quadrant IV. Graph the new position of the triangle and write the rule below.

(x +/- \_\_\_\_\_\_ , y +/- \_\_\_\_\_\_ )